

# DOCUMENT RESUME

ED 174 083

HE 011 424

**AUTHOR** Olswang, Steven G.; Cohen, William D.  
**TITLE** Two Related Research Studies: Identification of the Need and Means for Enhancing the Performance of College and University Administrators. AIR Forum 1979 Paper.  
**PUB DATE** May 79  
**NOTE** 24p.; Paper presented at the Annual Forum of the Association for Institutional Research (19th, San Diego, California, May 13-17, 1979)  
**EDRS PRICE** MF01/PC01 Plus Postage.  
**DESCRIPTORS** \*Administrative Personnel; \*Administrator Attitudes; Administrator Education; \*Administrator Evaluation; Affective Behavior; College Administration; Higher Education; \*Institutional Research; Interpersonal Relationship; Interprofessional Relationship; \*Leadership Qualities; \*Role Perception; Role Playing  
**IDENTIFIERS** \*AIR Forum 1979

## ABSTRACT

Two studies, conducted at the University of Washington and 30 large research-oriented institutions, examined the issue of performance of college and university administrators. In the first study, operational dissonance among the three levels of academic administrators were examined. Based on the role prescriptions and job functions of administrators delineated in previous reported studies, three questionnaires were developed. Respondents were asked to characterize their role functions and the degree of interaction with the other administrators, and to describe the observed performance of the role functions of other administrators. Provosts, deans, and department chairpersons were surveyed and 114 operational variables were studied. Usable responses were received from 417 of the 627 administrator sample. The second study examined task-specific tension and/or stress levels and their effects on the quality of administrator decisionmaking. Graduate students role playing as administrators completed tasks in which they experienced varying increases in tension and anxiety. Findings of both studies indicated the existence of inappropriate administrator behaviors leading to dysfunctional operations. Suggestions to alleviate identified problems include individual and group administrator training programs. (SW)

\*\*\*\*\*  
 \* Reproductions supplied by EDRS are the best that can be made \*  
 \* from the original document. \*  
 \*\*\*\*\*

ED174083



# THE ASSOCIATION FOR INSTITUTIONAL RESEARCH

This paper was presented at the Nineteenth Annual Forum of the Association for Institutional Research held at the Town and Country Inn in San Diego, California, May 13-17, 1979. This paper was reviewed by the AIR Forum Publications Committee and was judged to be of high quality and of interest to others concerned with the research of higher education. It has therefore been selected to be included in the ERIC collection of Forum papers.

Mary Corcoran  
University of Minnesota  
(Editor, AIR Forum Publications)

"PERMISSION TO REPRODUCE THIS  
MATERIAL HAS BEEN GRANTED BY

AIR

TO THE EDUCATIONAL RESOURCES  
INFORMATION CENTER (ERIC)"

U.S. DEPARTMENT OF HEALTH,  
EDUCATION & WELFARE  
NATIONAL INSTITUTE OF  
EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY.

TWO RELATED RESEARCH STUDIES:  
IDENTIFICATION OF THE NEED AND MEANS FOR ENHANCING THE PERFORMANCE  
OF COLLEGE AND UNIVERSITY ADMINISTRATORS

by

Steven G. Olswang, Ph.D.

Assistant to the Provost  
University of Washington  
Seattle, Washington 98195  
206-543-6616

and

William D. Cohen, Ph.D.

Planning Analyst  
Green River Community College  
Auburn, Washington 98002  
206-464-6133

Contributed Paper

19th Annual Forum  
Association for Institutional Research

ABSTRACT

A  
#22

TWO RELATED RESEARCH STUDIES:  
IDENTIFICATION OF THE NEED AND MEANS FOR ENHANCING THE PERFORMANCE  
OF COLLEGE AND UNIVERSITY ADMINISTRATORS

The problems of the late 1970's and anticipated complications of the 1980's have precipitated a need to identify the causes of perceived inefficient administrative performance in universities. Two studies were conducted, the first of which examined operational dissonance among the three levels of academic administrators in complex universities; the second examined task specific tension and/or stress levels and their effects on the quality of administrator decision-making. The results of both studies indicated the existence of inappropriate administrator behaviors leading to dysfunctional operations. Remediation methodologies to alleviate the identified problems are postulated to include group and individual administrator training programs.



TWO RELATED RESEARCH STUDIES:  
IDENTIFICATION OF THE NEED AND MEANS FOR ENHANCING THE PERFORMANCE  
OF COLLEGE AND UNIVERSITY ADMINISTRATORS

Higher education administration has long been considered the bastion of logical, pragmatic decision-making practiced by controlled, rational, and scholarly individuals possessing unquestioned expertise in their fields. This idyllic view of the decision environment has been perpetuated and imbued with a philosophical sanctity by popular demand as well as by institutional practice.

As a result, the natural inclination has been to maintain a laissez-faire posture towards the study of and the strict evaluation of academic administrative performance. However, recent research, conducted within institutions of higher education and on practicing and prospective administrators, has illuminated warning signs which suggest that the existing (or nonexistent) strategies and means for dealing with internal and external administrative pressures are inadequate. The problems of the late seventies, declining enrollments, limited budgets, external interference with internal processes, requirements of "education for jobs" necessitating degree and program reviews and potential eliminations, have precipitated an identifiable flaw in functional administrative performance without commensurate increase in administrative training. Without additional study (of the initial types described herein) to substantiate the inappropriate problem solving and decision-making processes and techniques, and related administrative performance decrements, the immature problems identified as existing in the late seventies may develop into the insoluble dilemma of the 1980's.

The studies reported herein have approached the issue of college and university administrative performance from complementary survey and experimental

research perspectives. The research, conducted at the University of Washington and thirty additional large research-oriented institutions, indicated that administrators fully comprehended neither the parameters of their own roles/tasks nor the roles/tasks of fellow administrators. Included within these parameters was knowledge of appropriate energy expenditures to complete goals, i.e., tension and/or stress levels. The uncertainty inherent in the above situation rendered administrators less likely to optimally utilize their personal talents and the existing organizational structures, e.g., communication networks, to facilitate institutional operation in general and decision-making processes in particular. Uncertainty was and is amplified by the sheer complexity of University-level administrator interrelationships.

To date, most higher education investigators have agreed that in institutions of higher education, particularly in the research university, the formal structure is so complex as to fail to describe either actual power or responsibilities of the primary actors. (Perkins, 1973). These inconsistent perceptions and understandings of the role functions of the primary administrators, i.e., Provosts, Deans, and Department Chairpersons, leads to inefficient and ineffective operations in many areas. "Lack of consensus among group members on their role definitions is a major dysfunctional element affecting the achievement of a groups goals." (Gross, Mason & McEachern, 1958). Such ambiguity of functions in a complex organization like a university leads to duplication or omission of responsibilities, and, equally serious, results in considerable miscommunication amongst levels so as to adversely affect effective decision-making. (Krech, Crutchfield & Bellachey, 1962).

Studies have been conducted identifying the specific role prescriptions, or job functions, of the various administrative officers in complex structured universities, including studies of provosts and deans (Dibden, 1968; Gould, 1964; Higgins, 1946; Linnel, 1975; Milner, 1936; Reeves & Russel, 1929, 1932; Ward, 1934) and of department chairpersons (Dressel, Johnson & Marcus, 1969; Gunter, 1964; Heimler, 1967; McLaughlin & Montgomery, 1976; McLaughlin, Montgomery & Malpass, 1975; Waltzer, 1965). Others have investigated the need and importance of consonant role understandings (role analysis theory) for effective prediction of administrative behavior and its advantages to efficient management operations (Dreeben & Gross, 1967; Gross, et al., 1958). However, few studies have applied such analysis to determine which particular areas of dissonance in the mutual understanding of role perceptions and performance exist to block the effective exchange of information between levels of managers in higher education. Such identification thereby permits evidencing first, whether dissonance actually exists, and second, in which areas the dissonance creates administrative problems, allowing the formulation of programs for remediation particularly geared towards the actual higher education setting. Such studies have been done between administrative personnel levels in school districts (Dreeben & Gross, 1967; Gross, et al., 1958) and in foreign education systems (Howard, 1970) and in particular segments of higher education (Welch, 1967).

In an attempt to identify the overall level of dissonance between these related higher education administrators, and to particularly identify the specific areas of deficiency, enabling the formulation, where necessary, of certain remediation measures aimed at increasing role consonance and

thus operational effectiveness between levels, a study was conducted based on data collected in a survey of 627 active administrators selected from the institutions which are members of the Association of American Universities.<sup>1</sup> Based upon the role prescriptions and job functions delineated in previous reported studies of role characteristics of each of the administrators, questionnaires were developed which requested the respondents to characterize their role functions and the degree of interaction with the related other administrators on these certain functions, and to similarly describe the observed performance of the role functions of other related administrators. Three separate questionnaire forms were used, one for each administrative group, with each form containing synchronized questions to the other forms, in order that corresponding data could be collected from each of the three administrative performers (Provosts, N=44; Deans, N=136; and Department Chairpersons, N=447). Statistical analyses were performed to determine significant differences on the 114 separate operational variables investigated. Completed questionnaires were received from 417 (or 67%) of the administrators requested (Provosts, n=28; Deans, n=99; Department Chairpersons, n=290).

In order to obtain a systematic depiction of the individual role perceptions and observed performances, the questions were grouped, for data analysis purposes, into four categories: communication processes, accountability, functional responsibilities, and areas of primary influence. The questions were tailored to rankings and 5-point Likert Scale responses, and data



analysis was performed by means of chi square ( $\chi^2$ ) with level of significance  $p < .05$ . Aggregate analysis was performed through use of a probability curve of testing significance for a series of related statistical tests (Sakoda, Cohen & Beall, 1964).

Results disclosed significant differences comparing role perceptions with others observed job performance in the aggregate measures between all levels. In other words, Provosts/Deans, Provost/Chairpersons, and Deans/Chairpersons comparisons all resulted in aggregate findings that what each says he/she does is significantly different from what the other administrators, to whom he/she reports or is reported to, observes the related other as doing. There is dissonance, at a statistically significant level, between administrators, leading to the overall suggestion that between the various levels of management within the organization of complex institutions of higher education serious problems exist leading to inefficiency.

Particularly acute dissonance problems manifested themselves in responses to perceived areas of individual's responsibility and overall communication. For example, Provosts claimed high levels of knowledge of departmental programs but Chairpersons reflected their belief that, based on central administrative actions, provosts had basically no knowledge of departmental programs. Further, general discontent over communication exchange was evidenced by a response by over 50% of all constituencies participating that the processes in higher education are totally ineffective to permit necessary and meaningful exchanges of information between levels. Thus, all administrators agree on the need for improved communication networks within the institutions.

Most important, specific areas of operational responsibility were examined to determine the actual job functions and/or tasks performed by each role participant and the satisfaction level of the other related administrators as to the performance. Consonance occurred as to the primary budgetary and organizational responsibilities of provosts; but no consonance evolved in an examination of the responsibilities of deans, particularly as observed by chairpersons. Whereas deans viewed themselves as academic program and policy planners, chairpersons viewed them as failing totally in the performance of that job function. Chairpersons perceived deans acted primarily as managers of the budgetary operations of the college, pursuant to the dictates passed down to them by provosts, and not as academic innovators or programmers. Chairpersons' responses clearly evidenced a failure of knowledge of the actual job responsibilities of the dean, and correspondingly observed them as having little effect on the overall policies of the University.

The overall effectiveness of each administrative authority was tested in terms of the actual and perceived power to accomplish the traditional functions ascribed to each position. Deans were observed by chairpersons, as stated; as ineffective in this regard. Chairpersons believed that deans were usurped in their functions by provosts, and deans felt that same helplessness in their perceptions that they had considerably less influence over the course of their colleges' futures than did provosts. This feeling of lack of effective power was pervasive throughout the study at all levels of administration examined. No one group of administrators responded that they perceived they had sufficient influence to affect decisions, but each



believed that power rested in another group. However, while all the groups indicated certain frustrations in their perceived effectiveness, they all, interestingly, indicated high levels of satisfaction in their roles.

The study findings resulted in statistically significant differences in perceptions and observed performances, indicating high levels of dissonance among all three levels of administrators examined. Particular areas of concern included communication disfunctions and lack of consensus of role responsibilities. These problems require the conclusion that organizational effectiveness and efficiency severely suffers in higher educational institutions. Training programs to enhance the level of mutual understanding of functional responsibilities for each role, and instituting common communication and operational networks, are methodologies postulated to combat these problems.

The aforementioned study disclosed the fact that the more uncertainty about functional responsibilities within a system of related decision-makers, the less effective the organization is in accomplishing its goals -- in rendering high quality decisions. Often, "uncertainty" stems from the lack of relevant information for making decisions, that is, a limited amount of information to which a meaningful task oriented response is possible. The second but related study investigated the effects of tension, anxiety and/or stress in relation to uncertainty and/or ineffective, inefficient behaviors practiced by administrators when confronted with specific task situations; the above elements were defined as stressors.

Tension may be a stressor, or may become a stressor. Whether it is adaptive or maladaptive depends upon the individual's skills in employing

tension levels that are consistent with the tasks to be accomplished. As a stressor, prolonged tension may cause stress. According to Selye (1956), stress is the rate of all wear and tear on the human organism, irrespective of classification of stressor, producing bodily changes of a reactive nature, e.g., elevated heart rate, blood pressure, muscle action potentials. Of critical importance is the fact that stress may not only indirectly impair administrative performance, but "...stress, (in a direct mode), a growing dossier of evidence indicates, may be the executive's single most powerful and pervasive enemy, playing a role in a wide variety of maladies, from back pain to heart attacks." (Smith, 1975, p. 89).

Stressors are any agents, real or imagined, which cause the individual to experience significant change in sympathetic arousal, e.g., heart rate, blood pressure, muscle action potentials (tension). Any of the above autonomic measures may be stressors as well. Increases may potentially be either beneficial or detrimental to the individual's well-being. A stressor may be dealt with effectively, as evidenced by reduced heart rate and/or tension, or the coping process may itself be inappropriate and become an additional stressor. In this study graduate students role-playing as administrators completed tasks (stressors), in which they experienced varying (depending on the task) increases in tension and anxiety.<sup>2</sup>

Four simulated administrator tasks were employed. They were developed from four general, loosely defined areas of concentrated administrative decision-making activity. According to Adams, Kellogg, and Schroeder (1976), the areas

of concern could be: 1) personnel; 2) institutional goal-setting - space utilization; 3) faculty performance evaluation - academic freedom, and 4) budgeting. Each of the tasks was tested to determine its capability to generate tension and/or stress. In nearly all cases, heart rate, blood pressure, and muscle action potential levels increased significantly from an adaptation period to the task performance period, then dropped again during the recovery period. In addition, a negative correlation between anxiety levels and quality of decision-making was significant; for the space utilization and personnel tasks, higher anxiety levels precipitated reduced quality of decision-making. A quality decision is complementary to the goals of the decision-maker and is typically the best possible job done through utilization of available resources.

In addition to those general results, the study found that on the space utilization, personnel, and budget tasks, a weak, yet significant pattern developed regarding subjects' perceptions of tasks causing increased stress and therefore less satisfaction with decisions. Where certain physiological indices of the stressor effect increased, especially systolic blood pressure, subjects also perceived the tasks as more stressful. At the same time they felt less satisfied with their decisions. Further evidence of the accuracy of these perceptions was provided by correlating subjects' post-task paper/pencil evaluations of anxiety with their perceptions of stress and satisfaction with decisions. When anxiety levels rose, subjects perceived tasks as more stressful and were less satisfied with their decisions.

While the Pearson Product Moment Correlations providing evidence of a relationship among the above measures were small and thus not statistically

suitable as a basis for substantiated conclusions, the results of analysis of variance indicated that task content, quality, and/or difficulty was responsible for significant variability in subjects' perceptions of post-task tension levels and in the quality of their decision-making. This latter fact is especially critical in light of the first reported study's findings regarding dissonance between role/task perceptions and performances.

From an institutional research perspective these studies determined that utilization of both objective data, i.e., physiological measures and scalar responses, and subjective self-report responses, would be most desirable for purposes of analysis. The combination of data was theoretically appropriate for few attempts have been made to study the implicit relationship between the two types of measures. According to Kahn, Wolfe, Quinn, Snoek, and Rosenthal (1964), the individual functions within an environment in which one perceives demands and the necessity to respond to them at various intensity levels. Some of these demands may be unperceived by the individual - yet they elicit observable, measurable physiological responses. Actually, individuals may intentionally or unintentionally amplify, underplay, or deny the existence of the original tension producing situations, the potential causes of stress - thus perpetuating inappropriate response activity, i.e., decision-making. In contrast, physiological measures of stress are not dependent upon the administrator's introspective evaluations of their emotional feelings (Hopkins & Chambers, 1966). In the dissonance study, the researcher utilized respondent's perceptions when he examined prescriptive role characteristics and performances for administrators in colleges and universities. He found that administrators, when dealing with situations (tasks) demanding communication, determining



allegiances and/or accountability, and establishing and maintaining areas of influence and effectiveness, tended to adhere to misconceptions of both their roles/tasks and performance criteria. The major categories in which "dissonance" consistently occurred were communication procedures and areas of responsibility, influence, and effectiveness. In particular, respondents did not agree on the methods for obtaining and exchanging information, and on the effects of their decisions. The above role characteristics or task completion factors are critical elements of the decision-making process and provide a direct link between the two works. Further, it is not possible to eradicate stress, tension, and anxiety from the process of manipulating and internalizing role expectations and evaluations of performance.

The realm of higher education administration deserves definition as a highly complex decision-making environment. And, the multiplicity of factors and the interconnections among the factors generate complex information needs. To function in this atmosphere administrators must achieve and maintain a multifaceted equilibrium. They must have a sound philosophical and pragmatic understanding of their roles/tasks as individuals and of their working interrelationships with fellow administrators. In addition to this internal orientation, administrators must learn to react to their external constituencies, to societal pressures. The catalysts that allow the above ecosystem to function include utilization of that optimal portion of an administrator's energy reserve, i.e., the proper amount of tension or stress for completion of a given task, the capability to identify problems, and data acquisition and information production skills. The fact that the above system does not function smoothly may be

attributed to the failure of colleges and universities to train and orient their administrators to their institutional roles/tasks.

Training programs have been recommended by others who have studied the operations of particular administrators (Smart & Elton, 1976; McLaughlin et al., 1975). Yet the type of training necessary has rarely been narrowed. The studies herein reported have specifically identified deficiencies in mutual understanding of job functions as well as identified those job functions which create the highest level of stress, thus allowing the particularization of those areas requiring special training. It is suggested herein that types of training to alleviate the two now identified problems might be as follows:

1. Group training to enhance consonance of role perceptions and performance.

Early psychological research has found that in the absence of common understandings of role prescriptions and responsibilities, each of the persons within the organization's goals "will have some uncertainty, or even anxiety.. The more important it is for them to pool their efforts - in working, in planning, or even playing - the more essential is an awareness of consensus about matter relevant to their association." (Newcomb, Turner & Converse, 1965).

With the overall dissonance demonstrated between administrators and their counterparts in terms of common understandings of role responsibilities, it becomes necessary to institute programs which will clarify for all these responsibilities. Group orientations, held on a yearly basis, at the outset of each academic year for all levels of administration together, should serve to clarify role functions, operational procedures, and communication patterns



utilized at the particular university. Functional role responsibilities should be delineated, and interrelationships between roles specifically addressed. By this means, overlap - or more important - gaps in functions will be reduced, and consensus heightened, resulting in more efficient operations. Functional expectations would no longer be dissimilar, allowing effective reliance by each operational level on the other.

Further, ongoing colloquia, particularly at the college level, involving chairpersons and the dean of the singular internal unit, should be held. Since the study demonstrated particularly high numbers of items evidencing dissonance between deans' and chairpersons' perceptions and observed performances, special concern should be shown towards training at the college level. Since data generation originates at the department, and final implementation of policies occurs there also, training for consonant role performance at that level becomes particularly critical.

2. Individual training sessions, geared to particular task content areas and stress reduction.

Instruction aimed at increasing the competence (and confidence) of individual administrators in terms of the functional job responsibilities will enable each to more effectively fulfill the role prescription. As Smart and Elton (1976) pointed out in their study of role responsibilities of chairpersons, "...special skills and capabilities are essential for the survival and success of individual chairmen" and it should no longer be expected that such skills are inherently present simply because of their previous observational positions as members of the faculty. If reliance is

to be placed by one administrative level on the functions of another, it is necessary to insure that each individual has the skills necessary to perform the functions.

Particular training should be given in areas of personnel and budgeting. These task areas evidenced the greatest levels of anxiety production, resulting in reduced decision-making capabilities. Higher education administrator preparation should also encompass a more extensive understanding of the stress concept as developed by Selye (1956, 1974) and active participation in tension control training as outlined by Jacobson (1971).

The forms of institutional research introduced here have exposed ongoing administrator-specific problems which threaten to reach serious proportions if not identified and eliminated wherever they exist. The authors' findings support the implication that over time, executive responsibilities (Argyris, 1957; Cangemi, 1975), such as selection of appropriate strategies to utilize in particular situations, problem solving, withstanding ample amounts of pressure, and the understanding of those responsibilities of related others in similar situations, may perpetuate and amplify what Selye refers to as wear and tear upon the human organism -- if intervention programs are not instituted.

Operationalizing studies of administrator performance relative to specific situational tension production should provide a mechanism for administrators to increase their functional efficiency. More to the point, institutional research studies such as those discussed in this paper could facilitate the

initiation of more functional communication networks among administrative cohorts. Similar investigations should result in the development of mechanisms for improving interaction among administrators and those individuals assimilating data and producing information for repetitive decision-making tasks, as well as for those tasks requiring evaluation of multiple alternatives and implementation of innovative decision strategies.

Thus, a new and necessary focus for institutional research has been identified as a tangible, and more important, a researchable issue for the 1980's.

FOOTNOTES

- 1 This study is more fully reported in Olswang, S. G., A comparative study of role prescriptions, perceptions, and performances of provosts, deans and department chairpersons, An Unpublished Doctoral Dissertation, University of Washington, 1977.
- 2 This study is more fully reported in Cohen, W. D., Higher education decision-making: the qualitative effects of tension producing situations, An Unpublished Doctoral Dissertation, University of Washington, 1978.

Reference List

- Adams, C., Kellogg, T., and Schroeder, R. Decision-making and information systems in colleges. Journal of Higher Education, 1976, 47, 33-49.
- Argyris, C. Personality and organization. New York: Harper and Row, 1957.
- Cangemi, J. Leadership characteristics of business executives appropriate for leaders in higher education. Education, 1975, 95.
- Cohen, W. D. Higher education decision-making: the qualitative effects of tension producing situations. Unpublished doctoral dissertation, University of Washington, 1978.
- Dibden, A. J. The academic deanship in american colleges and universities. Carbondale: Southern Illinois University Press, 1968.
- Dreeben, R., and Gross, N. National principalship study. Cambridge: Harvard University Press, 1967.
- Dressel, P. L., Johnson, F. C., and Marcus, P. M. The confidence crisis. San Francisco: Jossey-Bass, 1971.
- Gould, J. W. The academic dean. New York: Teachers College Press for Institute of Higher Education, 1964.
- Gross, N., Mason, W. S., and McEachern, A. W. Explorations in role analysis: studies of the school superintendency role. New York: John Wiley and Sons, 1958.

Gunter, C. G. The role of department chairmen in the governance of state universities. Unpublished doctoral dissertation, Washington State University, 1964.

Heimler, C. H. The college department chairman. Educational Record, 1967, 48-2, 158-163.

Higgins, R. L. The functions of the academic dean. Association of American Colleges Bulletin, 1947, 33, 393-399.

Hopkins, K. and Chambers, A. Anxiety, physiologically and psychologically measured, and its consequences on mental test performance. Washington, D.C.: United States Department of Health, Education and Welfare, United States Government Printing Office, 1966.

Howard, S. A comparative study of urban and rural teacher roles in a changing society...Lebanon. Unpublished doctoral dissertation, University of Michigan, 1970.

Jacobson, E. The two methods of tension control and certain basic techniques in anxiety tension control. Biofeedback and Self Control, 1971, 463.

Kahn, R., Wolfe, D., Quinn, R., Snoek, J. and Rosenthal, R. Organizational stress: studies in role conflict and ambiguity. New York: John Wiley and Sons, 1964.

Krech, D., Crutchfield, R., and Ballachey, E. Individual in society. New York: McGraw-Hill, 1962.



Linnell, J. The academic dean as enabler. Liberal Education, 1974, 60-3, 368-376.

McLaughlin, G. W., and Montgomery, J. R. Administrative roles of department chairmen, in Smart, J. C. and Montgomery, J. R. (Eds.), Examining departmental management. San Francisco: Jossey-Bass, 1976.

McLaughlin, G. W., Montgomery, J. R., and Malpass, L. F. Selected characteristics, roles, goals, and satisfactions of department chairmen in state and land grant institutions. Research in Higher Education, 1975, 3-3, 243-259.

Milner, C. A. The dean of the small college. Boston: The Christopher Publishing Company, 1936.

Newcomb, T., Turner, R. H., and Converse, P. E. Social psychology: the study of human interaction. New York: Holt, Rinehart and Winston, 1965.

Olswang, S. G. A comparative study of role prescriptions, perceptions, and performances of provosts, deans and department chairpersons. Unpublished doctoral dissertation, University of Washington, 1977.

Perkins, J. A. (Ed.) The university as an organization. New York: McGraw-Hill, 1973.

Reeves, F. W. and Russell, J. D. College organization and administration. Indianapolis: Board of Education, 1929.

Sakoda, J. M., Cohen, B. H., and Beall, G. Test of significance for a series of statistical tests. Psychological Bulletin, 1954, 51-2, 172-175.

Selye, H. The stress of life. New York: McGraw-Hill, 1956.

Selye, H. Stress without distress. New York: New American Library, 1974.

Smart, J. C., and Elton, C. F. Administrative roles of department chairmen, in Smart, J. C. and Montgomery, J. R. (Eds.), Examining departmental management. San Francisco: Jossey-Bass, 1976.

Smith, L. Can you cope with stress? Dain's Review, 1975, 106, 89-90.

Waltzer, H. The job of academic department chairman. Washington, D.C.: American Council on Education, 1975.

Ward, M. S. Philosophies of administration current in the deanship of liberal arts college. Contributions to Education Series No. 632, New York: Teachers College, Columbia University, 1934.

Welsh, C. E. Role conflict resolution, a replication of a study by Gross, Mason and McEachern. Unpublished master's thesis, University of Washington, 1967.